

LISA A. DURHAM

Geosciences and Information Technology Section
Environmental Science Division
Argonne National Laboratory

Education:

M.S.	Purdue University, Geology, 1989
B.S.	Texas A&M University, Geology, 1985

Professional Experience:

1989-Present	Environmental Scientist Geosciences and Information Technology Section Environmental Science Division Argonne National Laboratory, Argonne, Illinois
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Technical areas of expertise are hydrogeologic analysis, and geostatistical and numerical modeling of groundwater flow and contaminant transport. Expertise also includes application of Adaptive Sampling and Analysis Program (ASAP) characterization and remedial technologies, and Web-based decision support tools to support characterization and remedial activities at hazardous waste sites.

Project activities include supporting the Formerly Utilized Remedial Action Program (FUSRAP) Linde site, Ashland 1 site and Ashland 2 site soil remediation projects for the U.S. Army Corps of Engineers. Implemented newly developed approaches to environmental data collection that exploit the ability of advanced sensors, Global Positioning Systems (GPSs), and internet-based data management/decision support technologies. These approaches form the backbone for adaptive sampling and analysis program (ASAP) design for hazardous waste site characterization and the Precision Excavation approach for soil remedial actions. For the Ashland 1 and Linde sites developed technical, dynamic (secure) Web sites to serve the purpose of integrating, analyzing, managing, and presenting real-time clean-up information to decision-makers and stakeholders so that field decisions can be made in a timely fashion. The results of the cost benefit analysis indicated that by using a Precise Excavation and a Web-based data management approach at the FUSRAP Ashland 2 site, over \$1.5 million in cost savings were achieved by avoiding unnecessary off-site disposal costs for soil.

Other project activities include preparing Environmental Assessments, Environmental Impact Statements, Final Status Survey Plans, Data Management Plans, Quality Assurance Plans, and other regulatory decision documents for DOE and DOD facilities.

Summary of Previous Experience:

1986-1987 Environmental Research Division, Argonne National Laboratory

Participated in a research project that involved five months of extensive field work and three months of water chemical analyses in the laboratory. Twenty surface coal mine lakes, located throughout the United States, were investigated to identify the hydrological, geochemical, and limnological factors that control the water chemistry in these types of land reclamation lakes.

1985-1986 Teaching Assistant/Research Assistant
Purdue University, West Lafayette, Indiana

Coordinator and instructor of laboratory activities for the graduate course in groundwater and contaminant transport modeling.

Summers of
1981-1984 ARCO Exploration Company, Houston, Texas

Participated in oil exploration activities using geophysical and geological data to map offshore areas in the Gulf of Mexico and onshore regions in east Texas.

Research Interests:

Optimization techniques for groundwater monitoring networks and remedial design systems
Geostatistical methods to characterize soil and groundwater contamination

Professional Activities:

Geological Society of America
National Ground Water Association
Sigma Xi

Publications:

Author of 30+ reports and conference publications.